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IN THIS ISSUE: FALL 2009 TASK ANALYSIS REPORT

MESSAGE FROM THE CHAIR

Anne M. Fisher, CNMT



"Change does not necessarily assure progress, but progress implacably requires change. Education is essential to change, for education creates both new wants and the ability to satisfy them." ~ Henry Steele Commager

As the field of Nuclear Medicine continues to evolve ... so does the NMTCB!

The NMTCB Board of Directors met in October to work on our action items to strengthen the practical and professional aspects of

our field. While much of this is reviewed in the newsletter I am highlighting a few items of special interest.

Features have been added to a section of NMTCB webpage that is devoted exclusively to Nuclear Medicine Technology Training Program Directors. At the SNM Annual Meeting in Toronto this past June we hosted a reception for Program Directors and educators to roll out the webpage features and have a short Q&A session. The reception was well received and the webpage is proving to be a great tool!

As noted in the Spring Newsletter, the NMTCB has now converted both the PET and NCT specialty exams to "on-demand" from a once a year exam date. Applications are accepted year round and, once approved, the candidate has six months to take the exam. I again wish to thank Robert Pagnanelli and Leesa Ross for all of their efforts to make this transition to an on demand system happen so successfully.

(Con'd Chair..., Pg 2, Col.1)

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(Con'd from Chair..., Pg 1, Col.2)

This will be the last paper newsletter as the NMTCB is trying to "go green" and future issues will be received electronically and available on the webpage.

As the NMTCB Board of Directors is very dynamic, each year we must say goodbye to Board members as they transition off. With much gratitude we say farewell to April Mann and Danny Basso. Both of them were instrumental in the development of the NCT exam and each served the Board as Chair. Their contributions have made a significant impact to the past, present and the future of the NMTCB and will continue to do so for many years to come. We will miss April and Danny for their charm, wit and wisdom. With their departures come new arrivals and we welcome our newest NMTCB Board members Angela Foster, CNMT and Nancy McDonald-DeLoatch, CNMT. Their knowledge base will provide additional depth to the expertise of the board.

I have deeply enjoyed my year as Chair of the NMTCB Board of Directors. I cannot thank the office staff enough for all of their help, especially the efforts of Dave Perry and Katie Neal. I would like to take this opportunity to remind all NM professionals that we all must remain active and committed to our profession. No one else is going to look out for us or the quality of service we provide to our patients. Each of us has the responsibility to nurture and protect the future of our practice.

We invite all certificants to share their concerns and ideas on issues vital to the nuclear medicine profession by writing to us. This is your newsletter and it's here for you, our certificants, as we plan our future together. Every communication will be given full consideration. Again, many thanks for your support.

EXECUTIVE DIRECTOR'S MESSAGE

David Perry, CNMT, PET

As we make our way toward the holidays and another year's end, it is natural to reflect back on the activities of the past twelve months. This has been a big year for the NMTCB. One of the major projects we have been addressing all year is the transition of a renewal cycle of January through December for all certificants to one that ends on the last day of

each certificant's birth month. Coupled with this is the transition of a January through December CE Cycle to one that ends on the last day of the month immediately preceding each certificant's birth month. The NMTCB took on this tremendously complex transition project at the request of our certificants who found themselves trying to keep up with multiple certifications with different expiration and CE due dates. Rather than fight the trend, the NMTCB examined the requirements of a variety of other credentialing bodies and chose the model that seemed most likely to benefit the greatest number of our certificants. Despite our many publications about these subjects online and in print, there were a small number of certificants who were confused by this process but, by and large, the whole undertaking, while time consuming, went rather smoothly.

As significant as these cycle transitions have been, the NMTCB has been seeking to offer improved services in other areas as well. In early August 2009, the NMTCB launched a newly redesigned website. Not only is the new website a little more modern and quite a bit faster, with our change to a new webhost, we can take advantage of some features not available to us with the previous host. Because of that, we are able to offer more information to our certificants that seems to be very useful to many. One of the new features that certificants can take advantage of is our redesigned Certificant Directory. Now, when a certificant logs into the Certificant Directory, he or she will be provided with the contact information we have on file for that individual. It is important to note that much of this detailed information is not available online to anyone but the certificant. We continue to work to improve our website and soon plan to add a feature that will describe the certificant's CE Cycle begin and end date and the calculated number of hours of continuing education required for that cycle. In addition, we will soon be able to upload calculated renewal fees so that the online renewal process will be easier.

I would like to take this opportunity to remind certificants that each and every renewal application, whether submitted online or by mail, must be manually reviewed before it can be processed. This review involves numerous steps and can be somewhat time consuming. All of this is to say that renewal does not automatically happen at the time that the online submit button is clicked or the envelope is dropped in the mail. In fact, it has been our experience that mail from

some parts of the country may take as long as seven days before it reaches us. We encourage certificant to renew online for faster turn around but, regardless, please plan ahead. If your job requires an active and up to date certification card, please be certain to submit your renewal early. It is not unreasonable to expect renewal by mail to take as much as two to three weeks before your new card will be received, depending on mail delivery and volume of renewals. If you do find that you need verification of certification and have not yet received your card, please check out our Online Verification system at <http://www.nmtcb.org/certificants/verification.php>. We consider our Online Verification system to be primary source verification that is maintained directly by the NMTCB and is updated online nearly every weekday. In fact, the online verification will always be the most up to date reflection of a certificant's status, as the wallet card is only representative of the status at the time the card was printed.

Changing gears, we have two Board members whose terms end this year. April Mann and Danny Basso will be leaving the Board after having served eight years apiece. Danny and April have long been pillars in the nuclear cardiology community and were two of the primary drivers behind the development of the NMTCB's nuclear cardiology specialty exam. Each of them served a term as Chair of the NMTCB and, between them, they also chaired nearly every committee on the Board. We will miss them very much.

On a happier note, our Associate Executive Director, Katie Neal, recently brought a young one into the world. Mother and child are doing fine and we anxiously look forward to Katie's return to the office in December.

The NMTCB has begun development of a new certification exam for those who complete the Nuclear Medicine Advanced Associate (NMAA) degree program. According to the SNM, "the NMAA is a first-of-its-kind master's level degree program now being offered to provide nuclear medicine professionals with another career pathway for advancement in the field. The program will help meet the growing demand for advanced imaging practitioners as new procedures are developed and as the range and utilization of imaging procedures expand. The NMAA program offers nuclear medicine technologists all over the country an opportunity to advance their degrees and further their careers in nuclear medicine—

while providing the best in health care to the patients they serve." The NMTCB plans to have a certification exam ready in time for the first graduates of this program in less than two years.

Finally, the NMTCB mourns the passing of Sue Weiss who served as one of the founding members of the Board who established the NMTCB. We will miss her.

The NMTCB wishes you and your family a happy and blessed holiday season and a very happy 2010.

HOT TOPICS IN NM NEWS

NMTCB Goes Green

One might believe that the worldwide push to "go green" is coming solely from politicians and concerned citizens. This is NOT the case at all. In recent years, many big-name companies have realigned towards more sustainable and eco-friendly business practices. After careful deliberation, the NMTCB is joining the ranks of Coca-Cola, Mc Donald's, and Dell in moving towards a more green business practice.

At the spring 2009 meeting, the Board of Directors began its going green campaign when it agreed to save over 200 pounds of paper per year by sending student packets out on flash drives as PDF files. Then at our Fall 2009 Board meeting the decision was made to move the newsletter to an electronic version. Other efforts include working to reduce paper mailings to certificants and encouraging electronic renewal and email communications over the trading back and forth of paper through the mail.

These efforts can reduce spending, waste and handling and save our resources for other important areas. Paperless efforts can result in significant reductions every year in thousands of pages and cases of paper, ink and other consumables, but also about 50% less handling. If one factors in delivery or courier costs, optimized workforce, and savings, this can be substantial savings every year for our environment and economy.

Think about all the corrections, edits, multiple versions and handoffs not to mention the waiting when paper is passed from person to

person. A paperless system can result in quicker approvals, and reduced errors. Then, accurate communications can be instantly delivered and received all over the membership at once—resulting in improved work flow and shorter turn-around times.

Who wouldn't love to spend less time at the copier and more time with the customer?

We will archive the past versions of the newsletter on the NMTCB Website and you don't have to worry about keeping your paper copy or wondering where you put it when you want to research a prior topic that we covered.

The NMTCB will continue to take every opportunity to gather email addresses so that all non-essential communication can be done by email or over the phone. Please make this a priority when asked to fill in your electronic contact information.

After the newsletter, only bills, certification cards, audit notifications and disciplinary correspondence will be on paper.

The Board would be pleased to accept your ideas on identifying ways to reduce these remaining paper correspondences as well. Please contact us board@nmtcb.org or by telephone at (404) 315-1739.

Isotope Production

On November 5, 2009, the U.S. House of Representatives passed the **American Medical Isotopes Production Act of 2009** (H.R. 3276). The vote was 400 in favor, 17 opposed and 16 abstentions.

This bipartisan legislation addresses the ongoing crisis in nuclear medicine by ensuring that reliable supplies of medical isotopes are produced in the United States. In addition, the bill will lead more reactors around the world to convert away from weapons usable highly enriched uranium (HEU). The importance of converting reactors at home and abroad away from the use of HEU has been recently highlighted by the negotiations over providing fuel for Iran's medical isotope reactor,

which was originally fueled with HEU. This Bill allocates \$160 million for the United States to produce its own Molybdenum-99 (Mo-99) without the use of HEU and to phase out the export of HEU to foreign producers of Mo-99. Currently Mo-99 is produced in Canada and the Netherlands and highly enriched uranium is used in the process. Recently, there have been repeated shortages of Mo-99 in the United States. These shortages have resulted in a delay in patients having nuclear medicine procedures and some patients having less effective or less efficient diagnostic examinations. The Bill has been referred to the Senate Committee on Energy and Natural Resources.

On October 28, 2009 President Obama approved \$20 million to jump-start U.S. domestic production of medical isotopes without the use of bomb-grade, highly enriched uranium, by signing into law the **2010 Energy and Water Appropriations bill**. The appropriations bill conference report states (p. 131): "From within available resources, \$20,000,000 shall be provided to accelerate the conversion of research reactors to support the domestic production of molybdenum-99."

New CPT Codes Released for MPI Studies- Effective Jan 1, 2010

Changes in the codes for myocardial perfusion imaging studies reflect that 95 percent of the time the add-on codes for wall motion (78478) and ejection fraction (78480) are being billed with the MPI code 78465 and therefore all three codes are recommended to be bundled together into inclusive codes to eliminate redundancy. These recommendations are the result of by the AMA Five Year Review Identification workgroup and the Centers for Medicare and Medicaid Services (CMS). The SNM, ACC and ASNC worked jointly to submit recommendations to develop MPI packages of codes that describe the entirety of the procedures. Additional information about the new codes and payment Fee Schedules are available on the SNM, ACC and ASNC websites.



IN MEMORIAM – SUE WEISS 1944 TO 2009

David Perry, CNMT, PET

The NMTCB joins the nuclear medicine community in mourning the loss of Sue Weiss, who passed away on July 19, 2009. During her lifetime, Sue was a nuclear medicine technology pioneer, leader and visionary. Much has been written about her since her passing including articles in the SNM publications Uptake and Journal of Nuclear Medicine Technology (JNMT). One may also read what members and leaders of the SNM and SNMSTS remember about her on a special web page on the SNM website at www.snm.org. These articles and comments describe the significant contributions Sue made to nuclear medicine technology and the SNM, and rightly so. What is less often mentioned is Sue's contributions to the beginnings of the NMTCB so, in honor of Sue, we would like to take just a couple of inches of column space to outline her role in the founding success of the Nuclear Medicine Technology Certification Board.

In 1976, the National Council of the Society of Nuclear Medicine Technologist Section voted to establish an independent certification organization for nuclear medicine technologists. Among those appointed to the Task Force responsible for launching such an organization were Mark Muilenburg, Jim Langan and Susan Weiss... Minutes still exist from those meetings and out of them, the NMTCB was born in 1977. Sue was elected as the first Secretary of the NMTCB Board of Directors and the minutes of those early years show that she was highly involved in developing the first examinations, as well as many of the Bylaws and processes under which the NMTCB works to this day. The NMTCB largely owes its existence and the success it has achieved to Sue and the other pioneers that took a concept born of the SNMSTS National Council and made it a reality.

On a more personal note, I first met Sue at the first SNM Midwinter Meeting I attended in the early 1980's. From the start, I could see that she was a friendly, knowledgeable and highly intelligent person whom I could look up to as a leader of the Technologist Section. During the mid 1990's I made the decision to start becoming more active at the national level. At my first meeting I met this woman that I felt that I recognized but I just couldn't place her. It was only later that I remembered Sue and was amazed that 15 years after I had first met her, she was still a commanding presence at the national meetings. Little did I know that she had started long before we first met.

I saw Sue at the SNM Annual Meeting in Toronto this past June. It was from a distance and I regret that I did not take that opportunity to go and speak with her. The nuclear medicine community in general and the NMTCB in particular need more leaders like her with a vision and the drive to do what is right, even if it is not easy.



NMTCB FALL 2009 TASK ANALYSIS REPORT

Jimel Carpenter, CNMT, NCT

The NMTCB acknowledges that our profession remains in a constant state of evolution. In recent years, the rapid growth of PET technologies, cyclotron produced radioisotopes, and the hybridization of many of the formerly stand-alone imaging modalities have all greatly expanded the boundaries of nuclear medicine technology. In addition, the often-scarce availability of reactor-produced isotopes has and will continue to push the profession toward change. To remain relevant we must be inventive and adapt to contemporary trends. As an organization, the NMTCB remains committed to the challenge of keeping pace with changes that affect the knowledge and skill requirements for technologists entering the field. The process by which the content for the NMTCB entry-level examination is periodically updated through is referred to as "task analysis". In the spring 2009 edition of the NMTCB newsletter, preliminary findings of the task analysis survey were discussed. This fall 2009 publication will serve as the announcement of pending content changes to the entry-level nuclear medicine technology examination. Educators preparing students for the examination are being given a one-year notice of the new material to be incorporated into examination content. Prospective certificants can expect to see the proposed new content on the examination beginning January 1, 2011.

As a refresher, a brief synopsis of the task analysis process will follow. The task analysis procedure has three main components, which ultimately manifest in changes to the content of the entry-level nuclear medicine technology examination the NMTCB offers. First, the NMTCB develops an instrument, and a random survey is conducted. Second, the results of the survey are analyzed and assessed for their criticality in current practice of nuclear medicine technology. Finally the results of the data analysis are incorporated into the documents that outline the content of the examination. There are three main documents that the NMTCB uses the information from the task analysis to update. They are the task list (TL), the detailed equipment and

procedures list (DEPL), and the components of preparedness statement (COPS).

During the spring 2009 NMTCB Board meeting, the results of the survey were presented by the task analysis committee. A discussion was held by the full Board as to the changes to be made to the examination content. A set nominal cutoff was not used in determination of changes to be made to the examination content. The task analysis committee rather relied on a combination of usage of numerical parameters to identify items to be considered for modification. Items on the current examination falling below 15% on the survey were all reviewed for their criticality in current practice of nuclear medicine technology. Items not currently on the examination that scored above 15% were taken into consideration for addition to the examination. From there, expert opinion of the task analysis committee, and other Board members further guided the decision of whether items were to be added to, or removed from examination content.

The survey instrument that was used to conduct the task analysis was developed based on the content of the current TL, DEPL, and COPS. It also incorporated items that were considered to be possible additions to the content base. The original survey draft form was sent to a small number of certified nuclear medicine technologists. The questions on the survey required respondents to rate the frequency with which they performed each task. Participants were also asked to indicate the equipment, pharmaceuticals, and procedures that were routinely utilized at their facilities. Equipment, pharmaceuticals, and procedures were not subjected to a frequency scale due to the fact that many, by nature, are not performed with great frequency, such as I123 MIBG, red cell mass, and others. Once problem areas on the survey were addressed, a revised instrument was sent out to 1200 randomly selected CNMTs. Of the 1200 surveys sent out, 572 were completed and returned by the specified deadline. This yielded an acceptable response rate of 47.7%. The data was analyzed and sorted by the NMTCB psychometric consultant, and the results were forwarded to the NMTCB task analysis committee for review.

The components of preparedness statement (COPS) document can be most useful to educators and candidates preparing for the examination. The COPS is a detailed description of

the basic tasks involving the items listed in the more concise task list (TL). This includes nuclear medicine equipment, procedures, and pharmaceuticals that a nuclear medicine technologist working in a variety of settings could likely be exposed to. Once in publication the new COPS will be sent to all known nuclear medicine technology educational programs. New programs or those that have had recent changes in location or accreditation should contact the NMTCB directly to ensure timely delivery of updated information. The most current iterations of these documents will also be available on the NMTCB website at www.NMTCB.org as of Jan 1, 2010.

Items that will be removed from the entry-level examination include: hemocytometer, wet film, venogram, schillings test, I125 serum albumin/RISA, I125 Iothalamate. The task data results were also discussed and the only active items falling below 15% were the dose calibrator geometry test, red cell mass, and plasma volume studies. It was decided based on criticality that the items would remain on the exam. At the fall 2009 NMTCB Board meeting the task analysis data was reviewed again. Final changes were discussed, including the deletion of several items that are no longer available. The following items have been added to the list of items to be deleted since the spring 2009 publication: P32 chromic phosphate colloid, P32 sodium phosphate, B12, and Tc99m gluceptate.

Items to be added to the examination content were in the area of computed tomography (CT). Since the advent of the hybrid/fusion imaging technology, our field has become increasingly intertwined with other modalities. The foremost of these is obviously CT. Based on the responses given via the task analysis survey roughly 25% of nuclear medicine technologists surveyed are already performing CT examinations. Many of these are low-dose CT scans, being used solely for attenuation correction or localization in conjunction with a PET or SPECT nuclear medicine imaging system. There are however a significant number of nuclear medicine technologists already performing diagnostic quality CT examinations that may involve the use of contrast agents. For the NMTCB's examination to remain relevant, this trend must certainly be reflected in upcoming nuclear medicine technology certification examinations.

It initially was the consensus of the NMTCB Board of Directors to retain the integrity

of the groupings of tasks within the task list. Upon review of recent exam data by the NMTCB psychometric consultant, a change was deemed necessary. With proposed additional content in the area of non-radioactive pharmacologic agents, more exam exposure will be needed for this category of examination items. Items in the current task list item 40 will be moved from subgroup III clinical procedures to subgroup IV radiopharmacy. Subgroup IV will be renamed radioactive and non-radioactive pharmacologic agents. Due to the aforementioned changes, the numbers assigned to several tasks will have to be reassigned. The former task 40 will have Oral/IV contrast added to it, and numbered as task 42 in subgroup IV. The former tasks 41 and 42 will be changed to 40 and 41 respectively. It was decided to also make the following alterations to the task list (TL). Tasks 22 and 23 will be combined into one task 22. The new task 23 will be to Perform and evaluate quality control on the CT imaging system.

The detailed equipment and procedures list (DEPL) will have CT specific content added to include quality control, equipment, computers, procedures, contrast agents, and interventional pharmaceuticals. The components of preparedness statement (COPS) will be altered to reflect the aforementioned changes in the task list. In addition, significant additions will be made in task 28 with regard to patient care items that are unique to CT. The other area that will be affected is task 36, where an entire new section will be integrated to include equipment preparation and image acquisition for CT.

In conclusion, the NMTCB has made a good faith effort to explain the upcoming examination content modifications. It is imperative that entry-level nuclear medicine technologists have a thorough understanding of all facets of the practice of nuclear medicine technology. Technologists should also be prepared for the integration of computed tomography into our everyday practice. Based on the results of the most recent task analysis survey, there is an ever increasing likelihood that nuclear medicine technologist's professional practice will involve performing some variety of CT scanning at some point. The NMTCB strives to produce a comprehensive examination that demonstrates our certificants ability to keep pace as the field of nuclear medicine technology continues to move forward.



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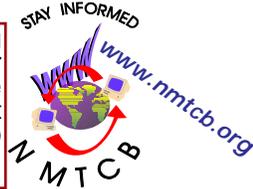
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HAVE YOU MOVED? Please keep your NMTCB file up to date by making sure your contact information is accurate. Updating the NMTCB with your current information takes just a couple of minutes online and will assure you that you receive important notices from us. Please visit www.nmtcb.org and choose “Address Change” under **Certificants** to make corrections to your contact information.



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ADDRESS SERVICE REQUESTED

PET EXAM UPDATE

Leesa Ross, CNMT, PET

On July 1, 2009, the PET Specialty Exam converted to an on-demand format. In the past, the PET Exam was only offered once a year in the fall. Now individuals can schedule the exam at a time more convenient for them. Since its conversion to the on-demand format, fifty-eight people have taken advantage of its availability between July 1 and October 31, 2009.

PET Specialty Examination applicants who do not hold active NMTCB, ARRT(N), or CAMRT(N) certifications must meet secondary requirements above the 700 hours of documented clinical experience. Active ARRT(R), or ARRT(T) applicants must also obtain 15 contact hours of coursework in each of the following areas: radiopharmacy, radiation safety, and instrumentation. The latest revision of the PET Examination coursework requirements now includes an allowance for up to 25% of the 15 contact hours in instrumentation to be fulfilled by CT specific education. A more thorough description of the didactic requirements may be found on our website at www.nmtcb.org/exam/definitions.php.

PET certified individuals are encouraged to submit examination items for the PET Specialty Examination at any time using the *Item Writer Online Submissions* link. This link is located under the *Resources* section of the NMTCB website, www.nmtcb.org. Items should be based on the current Content Outline for the examination. Submitted items are reviewed for relevancy and accuracy, and may undergo many revisions before becoming an actual item on the exam. Item Writing is a way of keeping the examination current, as well as a way for PET certified individuals to “give back” to the profession at their convenience.

The next application deadline for the PET Exam is May 1, 2010. Once an application is approved, an applicant may schedule to sit for the exam at any time within six (6) months of the eligibility decision. The PET specialty exam is administered nationally by IQT, Inc. A list of specific testing locations is available at www.isoqualitytesting.com/locations.aspx. And remember—PET certification only lasts seven years from the exam date!